--**ABSTRACT OF THE DISCLOSURE**

The invention relates to the production of an electrooptical printed circuit board (EOLP) and to the use thereof. The optical layer in the printed circuit board is made of highly transparent and soldering bath-resistant polysiloxane wave guides. The polysiloxane wave guides are produced according to casting techniques, and the ends of the wave guides can comprise deviating mirrors which are integrated at 45°. During the casting process of the printed circuit board, the substrate layers and the supersubstrate layers made of polysiloxane are brought into contact with printed circuit board materials having microstructured spacers which are used to define the thicknes of the substrate layer and/or the thickness of the supersubstrate layer. Openings are located in the printed circuit board material above the deviating mirrors, such that vertical light decoupling and coupling can take place. The printed circuit board can be applied to rigid or flexible carrier materials as an optical link circuit, or can be used as an optical layer in a multilayer-board composite or as an integrated optical component.--